CLAIMS:

1. A method of modulating the growth of a cell said method comprising contacting said cell with an effective amount of an agent for a time and under conditions sufficient to modulate the functional activity of sphingosine kinase wherein down-regulation of the functional activity of said sphingosine kinase down-regulates said growth and up-regulation of the functional activity of said sphingosine kinase up-regulates said cell growth.

2. A method of modulating the growth of a cell, said method comprising contacting said cell with an effective amount of an agent for a time and under conditions sufficient to modulate the level of functional activity of sphingosine kinase wherein down-regulation of the functional activity of said sphingosine kinase to an oncogenic ineffective level down-regulates said growth and up-regulation of the functional activity of said sphingosine kinase to an oncogenic effective level up-regulates said cell growth.

3. The method according to claim 2 wherein said growth is proliferation.

4. The method according to claim 3 wherein said modulation of proliferation is down-regulation of proliferation and said modulation of functional activity is down-regulation of functional activity.

5. The method according to claim 3 wherein said modulation of proliferation is up-regulation of proliferation and said modulation of functional activity is up-regulation of functional activity.

6. The method according to claim 4 wherein said proliferation is uncontrolled proliferation.

7. The method according to claim 6 wherein said cell is a neoplastic cell.

8. The method according to claim 7 wherein said neoplastic cell is a malignant cell.

9. The method according to claim 8 wherein said malignant cell is a cell from the colon, stomach, lung, brain, bone, oesophagus, pancreas, breast, ovary or uterus.

10. The method according to claim 9 wherein said malignant cell is a breast cell.

11. The method according to claim 9 wherein said malignant cell has become transfected due to up-regulation of an oncogene.

12. The method according to claim 11 wherein said oncogene is Ras.

13. The method according to claim 9 wherein said malignant cell has become transformed by sphingosine kinase overexpression oncogenic activity.

14. The method according to any one of claims 1-4 or 6-13 wherein said agent is N,N-dimethylsphingosine.

15. The method according to any one of claims 1-4 or 6-13 wherein said agent is DL-threo-dihydrophingosine.

16. A method for the treatment and/or prophylaxis of a condition characterized by aberrant, unwanted or otherwise inappropriate cell growth in a mammal, said method comprising administering to said mammal an effective amount of an agent for a time and under conditions sufficient to modulate the functional activity of sphingosine kinase.

17. A method for the treatment and/or prophylaxis of a condition characterized by aberrant, unwanted or otherwise inappropriate cell growth in a mammal, said method comprising administering to said mammal an effective amount of an agent

for a time and under conditions sufficient to modulate the level of functional activity of sphingosine kinase wherein down-regulation of the functional activity of said sphingosine kinase to an oncogenic ineffective level down-regulates said growth and up-regulation of the functional activity of said sphingosine kinase to an oncogenic effective level up-regulates said cell growth.

18. The method according to claim 17 wherein said growth is proliferation.

19. The method according to claim 18 wherein said modulation of proliferation is down-regulation of proliferation and said modulation of functional activity is down-regulation of functional activity.

20. The method according to claim 18 wherein said modulation of proliferation is up-regulation of proliferation and said modulation of functional activity is up-regulation of functional activity

21. The method according to claim 19 wherein said proliferation is uncontrolled proliferation.

22. The method according to claim 21 wherein said cell is a neoplastic cell.

23. The method according to claim 22 wherein said neoplastic cell is a malignant cell.

24. The method according to claim 23 wherein said malignant cell forms a solid tumour of the colon, stomach, lung, brain, bone, breast, oesophagus or pancreas.

25. The method according to claim 23 wherein said malignant cell forms a solid tumour of the breast.

26. The method according to claim 24 wherein said malignant cell has become transformed due to oncogene up-regulation.

27. The method according to claim 26 wherein said oncogene is Ras.

28. The method according to claim 24 wherein said malignant cell has become transformed by sphingosine kinase overexpression oncogenic activity.

29. The method according to any one of claims 16-19 or 21-28 wherein said agent is N,N-dimethylsphingosine.

30. The method according to any one of claims 16-19 or 21-28 wherein said agent is DL-threo-dihydrophingosine.

31. The method according to any one of claims 16-30 wherein said mammal is a human.

32. A pharmaceutical composition comprising an agent capable of modulating the functional activity of sphingosine kinase together with one or more pharmaceutically acceptable carriers and/or diluents for use in accordance with the method of any one of claims 1-31.

33. The pharmaceutical composition according to claim 32 wherein said agent is N,N-dimethylsphingosine.

34. The pharmaceutical composition according to claim 32 wherein said agent is DL-threo-dihydrophingosine.

35. A method of diagnosing a condition, or a predisposition or resistance to a condition, characterized by aberrant, unwanted or otherwise inappropriate cell growth in a mammal, said method comprising screening a biological sample from said mammal for the presence of sphingosine kinase or nucleic acid molecule ncoding sphingosine kinase.